

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3, 5-8, 10, and 11 are presently active in this case, Claims 1, 5, and 6 having been amended and Claims 2, 4, and 9 having been canceled by way of the present Amendment. Claim 6 has been withdrawn from consideration as being directed to a nonelected species, however, the Applicant wishes to note that Claim 1 is currently generic to the pending dependent claims.

The specification has been amended to correct any minors errors identified during a review of the specification.

In the outstanding Official Action, Claims 1-5, 7, 8, 10, and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-34486 in view of Stevens (U.S. Patent No. 5,481,441) and in view of Martin, Jr. (U.S. Patent No. 4,702,516). For the reasons discussed below, the Applicant respectfully requests the withdrawal of the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness cannot be established in the present case because (1) the references, either taken singularly or in combination, do not teach or suggest all of the claim limitations, and (2) there is no suggestion or motivation to combine the references.

Claim 1 of the present application recites a cab for a construction machine, being mounted on an upper rotary body of the construction machine along with a working

mechanism and providing an operating room within an enclosure comprising a first side frame structure containing a door to be opened and closed by an operator, a second side frame structure located on the side of the working mechanism, a front section provided between front ends of the first and second side frame structures and substantially entirely occupied by a front window, a roof section, and a rear section. The cab comprises a cross beam member bridged between upper front corners of the first and second side frame structures in such a way as to form a boundary between the front window and a top window in the roof section to ensure maximum visibility in an obliquely upward direction, and a reinforcing beam member provided between the first and second side frame structures and in front of the cross beam member. The reinforcing beam member being located in an obliquely upwardly projected position relative to the cross beam member when viewed by an operator in the cab.

The JP 7-34486 reference depicts a construction machine cab having a front window and a roof window. However, the JP 7-34486 reference does not contain a teaching with regard to any reinforcing member that reinforces the strength of a cross beam member without impairing the visibility in the forward and obliquely upward directions. More specifically, the JP 7-34486 reference does not disclose a reinforcing beam member provided between first and second side frame structures and in front of the cross beam member, where the reinforcing beam member is located in an obliquely upwardly projected position relative to the cross beam member when viewed by an operator in the cab, as recited in Claim 1 of the present application.

As discussed in the specification of the present application, a construction machine cab is advantageously provided with pillars and transverse structural members that are physically strong for ensuring the safety of an operator within the cab. A cross beam member, one of the structural members which contribute to the strength of the cab, should

have a strength for supporting a falling load or other large loads which might be imposed thereon. According to the Applicant's invention, in order to secure unobstructed visibility in forward and obliquely upward directions, a cross beam member is provided between a front window and a roof panel window. According to the Applicant's invention, a reinforcing member is provided in front of the cross beam member, at a position forward of an obliquely upward of the latter when viewed by an operator within the cab, which can provide maximum visibility of the operator in the cab. Such a construction machine cab is not disclosed or suggested by the JP 7-34486 reference.

The Applicant submits that the Stevens and Martin, Jr. references do not supplement the deficiencies in the teachings of the JP 7-34486 reference discussed above.

The Stevens reference describes a light bar apparatus (10) employing a light bar housing (12) of a square shape in section for supporting light assemblies. The opposite ends of the light bar housing (12) are supported by end support units (30 and 40).

The Stevens reference does not disclose or even suggest the light bar housing (12) is a reinforcing beam member for a cab, as recited in Claim 1 of the present application. The Steven reference does not disclose or suggest that the light bar housing (12) is provided between first and second side frame structures and in front of a cross beam member, as recited in Claim 1 of the present application, Furthermore, the Stevens reference does not disclose or suggest that the light bar housing (12) is located in an obliquely upwardly projected position relative to the cross beam member when viewed by an operator in the cab, as recited in Claim 1 of the present application.

In fact, the Applicant submits that the light bar housing (12) of the Stevens reference cannot function as a reinforcing beam member as recited in Claim 1 of the present application. The Stevens reference teaches that the light bar housing (12) is suitable for supporting light assemblies, however, the Applicant submits that the light bar housing (12)

cannot function as a reinforcing beam member because the light bar housing (12) is provided with a slot (21) longitudinally in its bottom portion (20), as depicted in Figure 4.

Additionally, a number of apertures are provided on the light bar housing (12), which are opened in its top wall (14) for receiving rotatable shafts of the respective light assemblies. The light bar housing (12) of the Stevens reference cannot function as a reinforcing beam member, and one of skill in the art would not have been motivated to combine the teachings of the Stevens reference with the teachings of the JP 7-34486 reference to provide such a feature.

Furthermore, the end support units (30 and 40) at opposite ends of the light bar housing (12) are described as being secured to a vehicle body through vertically extending posts (32 and 48, respectively). (See column 2, lines 54-59.) Namely, the light bar apparatus (12) of the Stevens reference is arranged to be mounted on a vehicle body with the top side (14) of the light bar housing (12) in a horizontal position. That is to say, the light bar apparatus (12) of the Stevens reference is arranged to mount the light bar on top of a horizontal portion of a roof or other structure of the vehicle. Thus, the Applicant's reinforcing beam member, which is located forward and obliquely upward of a cross beam, is not obvious from the teachings of the Stevens reference.

The Applicant further submits that the Martin, Jr. reference does not supplement the deficiencies in the teachings of the JP 7-34486 reference and the Stevens reference discussed above.

Accordingly, the Applicant respectfully requests the withdrawal of the obviousness rejection of Claim 1.

Claims 3, 5-8, 10, and 11 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other

features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 1.

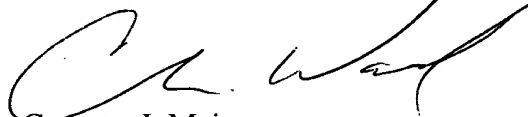
Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Finally, the attention of the Patent Office is directed to the change of address of Applicant's representative, effective January 6, 2003:

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IN THE SPECIFICATION

At page 15, line 12 through page 16, line 4, please amend the paragraph as follows:

On the rear side of the cab 10, the rear frame structure 14 is securely connected between the first and second side frame structures 11 and 12 to provide a reliably strong structure. On the other hand, [the] on the front side of the cab 10, the front section 13 and the roof section 15 are provided between the first and second side frame structures 11 and 12. The front section 13 and the roof section 15 are joined with each other through a joint structure as shown in Fig. [15] 5. As seen in the drawings, the front section 13 is constituted by the coextensive front window 23, while the roof window 25 in the roof section 15 is extended to the front edge of the roof section 15. In order to increase strength against compressive loads on the first and second side frame structures 11 and 12, a cross beam member 26 is bridged between upper front corners of the side frame structures 11 and 12.

At page 18, line 9 through page 19, line 3, please amend the paragraph as follows:

Therefore, for reinforcing the front side of the cab 10 to protect same from an extremely large load which would otherwise cause serious deformation or collapsing to the cab 10, a reinforcing structure to be employed should be arranged to guarantee a wide view [filed] field for the operator as much as possible. For this purpose, according to the present embodiment of the invention, a reinforcing beam member 30 is provided at the front side of

the cab 10 substantially in parallel relation with the cross beam 26. In this instance, the reinforcing member 30 is in the form of a hollow metallic rod-like structure like a steel pipe, and, may be arranged to present either a circular shape as indicated at 200 in Fig. 6 or a triangular shape as indicated at 301 in Fig. 7. No matter whether the shape of the reinforcing beam member 30 is circular or triangular, it is desirable to fill the internal cavity of the reinforcing beam member 30 with a foamed synthetic resin like foamed urethane resin for the purpose of enhancing its bending strength.

At page 19, line 18 through page 20, line 12, please amend the paragraph as follows:

The greater the diameter of the reinforcing beam member 30, the stronger becomes its strength. However, if the diameter of the reinforcing member 30 is thickened to a large excessive degree, it can bulge out from behind the cross beam member 26 to narrow the view field of the operator to some extent depending upon the viewing position of the operator. However, a reinforcing beam member 30 of a large diameter can be suitably located to fall substantially within the concealed space S behind the cross beam 26 without restricting the view field of the operator to any material degree, in case the reinforcing beam member 30 is shifted to a position which is at a greater distance from the cross beam member 26. Accordingly, a reinforcing beam member 30 of a suitable diameter can be employed from the standpoint of strength, and, in order to guarantee a broad view field for the operator, its mounting position is shifted in an obliquely upward direction from the cross beam 26 depending upon its diameter[.].

At page 20, line 13 through page 21, line 3, please amend the paragraph as follows:

For instance, suppose that a power shovel type excavator happens to lose balance and fall down on the ground while it is operating on a sloped ground as indicated by two-dot chain line in Fig. 10. In this case, an extremely large falling load is imposed on the machine as indicated by an arrow, tending to compress the cab 10 between the ground and the boom 7a of the front working mechanism 7. However, the imposed falling load is effectively supported by the cross beam 26 and the reinforcing beam member ~~[39]~~ 30 to prevent crucial collapsing or crushing of the cab 10. Namely, the shape retainability of the cab 10 under a falling load can be improved to a considerable degree to insure safety of an operator within the cab 10.

At page 22, lines 6-20, please amend the paragraph as follows:

The reinforcing beam member 30 can be mounted fixedly in position on the front side of the pillars 11a and 12a by the use of the mount structure as shown in Fig. 8. However, in order to let the reinforcing beam member 30 support a falling load before the cross beam member 26, it may be mounted in position by the use of brackets 132 as shown in Fig. 11. In this case, the brackets 132 are securely fixed to the pillars 11a and 12a in such a way as to hold outer corner portions of the latter and are thick enough to project laterally on the outer side of the first and second side frame structures 11 and 12, respectively. In this connection, it has been the general practice to provide a handrail 29 on the pillar 11a of the first side frame structure 11 to assist an operator at the time of climbing up into or climbing down from the cab 10. In such a case, from the standpoint of vehicle body width in transportation, it is desirable that the lateral projection of the bracket 132 does not exceed such a handrail.

At page 23, lines 1-7, please amend the paragraph as follows:

Alternatively, the reinforcing beam member 30 can be mounted in the manner as shown in Fig. 12. In this case, the reinforcing beam member 20 [is] has flattened portions 30a at its opposite ends, while mount members 232 are securely welded to the front pillars 11a and 12a of the first and second side frame structures 11 and 12. The flattened opposite end portions 30a of the reinforcing beam member 30 are securely fixed to the mount members 232 by means of bolts 230.

IN THE CLAIMS

1. (Once Amended) A cab for a construction machine, being mounted on an upper rotary body of said construction machine along with a working mechanism and providing an operating room within an enclosure [consisting of] comprising a first side frame structure containing a door to be opened and closed by an operator, a second side frame structure located on the side of said working mechanism, a front section provided between front ends of said first and second side frame structures and substantially entirely occupied by a front window, a roof section, and a rear section, [characterized in that] wherein said cab comprises:

a cross beam member bridged between upper front corners of said first and second side frame structures [to extend along] in such a way as to form a boundary between [upper side of] said front window and a top window in said roof section to ensure maximum visibility in an obliquely upward direction; and

a reinforcing beam member provided between said first and second side frame structures and in front of [for reinforcing] said cross beam member, said reinforcing beam member being located in an obliquely upwardly projected position relative to said cross beam member when viewed by an operator in said cab.

2. (Cancel)

4. (Cancel)

5. (Once Amended) A cab for a construction machine as defined in claim [4] 3, wherein said reinforcing beam member is bridged between brackets securely fixed to a front side of foremost pillars of said first and second side frame structures.

6. (Once Amended) A cab for a construction machine as defined in claim [4] 3, wherein said reinforcing beam member is bridged between brackets securely [fisted] fixed to a lateral side of foremost pillars of said first and second side frame structures.

9. (Cancel)